

In re Patent Application of:
WRIGHT ET AL.
Serial No. 09/976,647
Filed: October 11, 2001

In the Claims:

Claims 1-58 (CANCELLED)

59. (PREVIOUSLY PRESENTED) An aircraft data transmission system, the aircraft having a data acquisition unit, and the aircraft including a data storage medium having stored thereon flight data gathered in-flight by at least a first sensor on the aircraft, comprising:

a communications unit located in the aircraft and in communication with the data acquisition unit;

at least a second sensor configured to sense a landing of the aircraft;

a cellular infrastructure in communication with said communications unit after the aircraft has landed, wherein the cellular infrastructure communicates said flight data, and wherein the communication is initiated when at least the second sensor senses the landing of the aircraft;

a data reception unit in communication with said cellular information; and

wherein said flight data includes time, airspeed, altitude, vertical acceleration, and heading data relating to a flight of the aircraft.

60. (ORIGINAL) The system of claim 59 wherein said data reception unit is in communication with said cellular infrastructure via the Internet.

61. (ORIGINAL) The system of claim 59 wherein said data reception unit is in communication with said cellular infrastructure via the public switch telephone network.

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62. (ORIGINAL) The system of claim 59 wherein said communications unit has at least one modem in communication with said cellular infrastructure and said data reception unit has at least one modem in communication with said cellular infrastructure.

63. (ORIGINAL) The system of claim 59 wherein said cellular infrastructure includes:

an antenna;

a transceiver subsystem in communication with said antenna; and

a controller in communication with said transceiver subsystem.

64. (ORIGINAL) The system of claim 59 wherein said data reception unit includes:

a router; and

a processor in communication with said router, said processor having a storage unit.

65. (PREVIOUSLY PRESENTED) An aircraft data transmission system, the aircraft having a data acquisition unit, the aircraft including a data storage medium having stored thereon flight data gathered in-flight by at least one sensor on the aircraft, comprising:

sensing means for sensing a landing of the aircraft;

means for transmitting said flight data from the data acquisition unit, via a cellular infrastructure after the aircraft has landed, wherein transmission of the data is initiated when the sensing means sense the landing of the aircraft;

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means for receiving said flight data from said cellular infrastructure; and

wherein said flight data includes time, airspeed, altitude, vertical acceleration, and heading data relating to a flight of the aircraft.

66. (ORIGINAL) The system of claim 65 wherein said means for transmitting data includes a processor.

67. (ORIGINAL) The system of claim 65 wherein said means for receiving data includes a processor.

68. (PREVIOUSLY PRESENTED) A method of transmitting aircraft flight data from an aircraft, comprising:

receiving flight data from a data acquisition unit;
receiving a signal indicating a landing of the aircraft from at least a first sensor;

transmitting said flight data via a cellular communications infrastructure after the aircraft has landed, wherein the cellular communications infrastructure is accessed in response to the signal;

receiving said transmitted flight data; and
wherein said flight data is gathered in-flight by at least a second sensor on the aircraft, and includes time, airspeed, altitude, vertical acceleration, and heading data relating to a flight of the aircraft.

69. (PREVIOUSLY PRESENTED) A computer-implemented method of transmitting aircraft flight data from an aircraft, comprising:

receiving flight data from a digital flight data acquisition unit, wherein said flight data is gathered

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in-flight by at least a first sensor on the aircraft, and includes time, airspeed, altitude, vertical acceleration, and heading data relating to a flight of the aircraft;

receiving a signal indicating a landing of the aircraft from at least a second sensor;

processing said flight data to prepare said data for transmission; and

transmitting said processed data via a cellular infrastructure after the aircraft has landed, wherein the cellular infrastructure is accessed in response to the signal.

70. (ORIGINAL) The method of claim 69 further comprising receiving said transmitted data at a flight operations center.

71. (ORIGINAL) The method of claim 70 further comprising receiving said transmitted data and transmitting said received data via the Internet before receiving said transmitted data at a flight operations center.

72. (ORIGINAL) The method of claim 70 further comprising receiving said transmitted data and transmitting said received data via the public-switched telephone network before receiving said transmitted data at a flight operations center.

73. (ORIGINAL) The method of claim 69 wherein processing said flight data includes:
compressing said flight data;
encrypting said flight data;
segmenting said flight data; and

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constructing packets of data from said segmented flight data.

74. (ORIGINAL) The method of claim 69 wherein receiving said transmitted data includes:

- acknowledging receipt of said transmitted data;
- reassembling said received data;
- decrypting said reassembled data;
- uncompressing said decrypted data; and
- storing said uncompressed data.

75. (PREVIOUSLY PRESENTED) A computer readable medium having stored thereon instructions which when executed by a processor, cause the processor to perform the steps of:

- receiving flight data from a digital flight data acquisition unit in an aircraft, wherein said flight data is gathered in-flight by at least a first sensor on the aircraft, and includes time, airspeed, altitude, vertical acceleration, and heading data relating to a flight of the aircraft;

- receiving a signal indicating a landing of the aircraft from at least a second sensor;

- processing said flight data to prepare said data for transmission; and

- transmitting said processed data via a cellular infrastructure when said aircraft has landed, wherein the cellular infrastructure is accessed in response to the signal.